

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 7,127,383 B2  
APPLICATION NO. : 10/066293  
DATED : October 24, 2006  
INVENTOR(S) : Maria-Grazia Ascenzi and John Michael Kabo

Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

**Amendments to the Specification:**

Please replace the paragraph at col. 4, lines 43-49 with the following amended paragraph:

FIG. 2. Schematic drawing of torsional loading device used in the Examples.  
1=Rotational axis with its jaws; 2[[:]] and 3=hard metal wedges of the pendulum loading system; 4=the wheel around which the thread, lodged with weights, is attached; 5=the axis of the pendulum; 6=the mirror that reflects the laser beam onto the graduated scale to detect angle-of-twist variations (from Ascenzi, A. Baschieri, P. Benvenuti, A. (1994) The torsional properties of single selected osteons. J. Biomechanics, 27(7): 875-884).

Please replace the paragraph at col. 4, lines 50-51 with the following amended paragraph:

FIG. 3. Diagram showing the trapezoid cut from a thin transverse femoral section around a chosen alternate osteon (from Ascenzi, M.-G, Ascenzi, A., Burghammer, M., Panzavolta, S., Benvenuti, A. and Bigi, A. (2003) Structural differences between "dark" and "bright" isolated human osteonic lamellae. J. Structural Biology, 141, 22-33).

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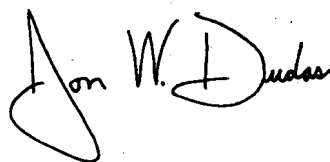
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Please replace the paragraph at col. 4, lines 58-67 with the following amended paragraph:

FIGS. 6A and 6B. (A) Material model consisting of fiber-reinforced unidirectional laminae. The first few external laminae are partially pulled out to show arrangement. (B) On a small laminar element of constant thickness, the principal material axes are labeled 1, 2, and 3. Direction 1 is parallel, and direction 2 perpendicular, to the fibers. Direction 3 is the radial direction, perpendicular to the plane of the diagram. Circumferential and axial directions are labeled  $\Theta$  and z. The angle between the circumferential direction and direction 1 is denoted  $\gamma$  Y (from Ascenzi, M.-G. (1999) first estimation of prestress in so-called circularly fibered osteonic lamellae, J. Biomechanics, (32): 935-942).

Signed and Sealed this

Tenth Day of July, 2007



JON W. DUDAS  
*Director of the United States Patent and Trademark Office*